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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,642	04/15/2004	Lucretia H. Vanderwende	M61.12-0647	9023

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EXAMINER
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NEWAY, SAMUEL G

ART UNIT	PAPER NUMBER
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2626

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/825,642

**Applicant(s)**

VANDERWENDE ET AL.

**Examiner**

Samuel G. Neway

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15-18, 24-27 and 29 is/are rejected.
- 7) ☐ Claim(s) 14, 19-23 and 28 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. This is responsive to the Application filed on 15 April 2004.

### *Claim Objections*

2. Claim 15 is objected to because it is believed "a sufficient scores" in line 4 is a typographical error.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 – 13, 15 – 18, 24 – 27, and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Lin et al (USPN 7,146,308)

Claim 1:

Lin discloses a method of identifying a characteristic of interest represented by a textual input (Abstract), comprising:

building a graph corresponding to the textual input ("build dependency trees formed of the relationships between the words", col. 2, lines 37-39);

scoring sub-graph components of the graph ("The similarity measure is based on the frequency of occurrences of words in the path", col. 2, lines 55-58);

identifying graph fragments of interest based on the scores ("discovering a set of inference rules", col. 2, lines 33-37); and

performing text manipulation based on the identified graph fragments ("building a database from text", col. 2, lines 50-55).

Claim 2:

Lin discloses the method of claim 1 wherein building the graph includes building the graph with nodes linked by links (Fig. 2B and related text).

Claim 3:

Lin discloses the method of claim 2 wherein the nodes correspond to words in the textual input or concepts represented by the textual input (Fig. 2B and related text).

Claim 4:

Lin discloses the method of claim 3 wherein building the graph further comprises generating the links as directed semantic relation names (col. 4, lines 65-66).

Claim 5:

Lin discloses the method of claim 4 wherein building the graph further comprises generating a set of abstract analyses for the textual input (col. 4, line 67 to col. 5, line 2).

Claim 6:

Lin discloses the method of claim 5 wherein generating a set of abstract analyses comprises: generating a set of directed acyclic graphs based on the textual input; and connecting the set of directed acyclic graphs to one another (col. 5, lines 2-7).

Claim 7:

Lin discloses the method of claim 2 wherein building the graph comprises: generating a syntactic parse for text portions in the textual input; generating a dependency structure from the syntactic parse; and generating the graph from the syntactic parse (Fig. 2B and related text).

Claim 8:

Lin discloses the method of claim 2 wherein building the graph comprises: identifying the nodes as adjacent or collocated words; and identifying the links between the nodes (Fig. 2B and related text).

Claim 9:

Lin discloses the method of claim 8 wherein identifying the links comprises: assigning directionality of the links arbitrarily (Figs. 2A, 2B, and related text, see also col. 4, lines 41-55).

Claim 10:

Lin discloses the method of claim 8 wherein identifying the links comprises identifying the links and assigning directionality of the links based on a given part-of-speech associated with the nodes, using a heuristic (Figs. 2A, 2B, and related text, see also col. 4, lines 41-55).

Claim 11:

Lin discloses the method of claim 8 wherein identifying the links comprises identifying the links and assigning directionality of the links based on a given part-of-

speech associated with the nodes, using a machine learned method (Figs. 2A, 2B, and related text, see also col. 4, lines 41-55).

Claim 12:

Lin discloses the method of claim 2 wherein scoring sub-graph components of the graph comprises: assigning a score to each node in the graph (col. 6, lines 42-46).

Claim 13:

Lin discloses the method of claim 12 wherein a pair of nodes and a link between the pair of nodes comprises a tuple and wherein scoring sub-graph components of the graph comprises: assigning a score to each tuple in the graph (col. 6, lines 42-46).

Claim 15:

Lin discloses the method of claim 13 wherein identifying graph fragments of interest comprises: matching sub-graph components of the graph to nodes and tuples having a sufficient score (col. 6, lines 42-46).

Claim 16:

Lin discloses the method of claim 15 wherein identifying graph fragments of interest comprises: identifying nodes, having a sufficient score, that are linked to the matched sub-graph components (Fig. 8 and related text).

Claim 17:

Lin discloses the method of claim 16 wherein identifying graph fragments comprises: identifying a node outside a matched sub-graph component that has a predetermined relation to a node in the matched sub-graph component (Fig. 8 and related text).

Claim 18:

Lin discloses the method of claim 17 wherein identifying graph fragments comprises: identifying certain relations, given a predetermined specific node type (Fig. 8 and related text).

Claim 24:

Lin discloses the method of claim 1 wherein performing text manipulation comprises one of summarization, information retrieval, question answering, document clustering, and indexing (col. 2, lines 64-67).

Claim 25:

Lin discloses the method of claim 1 wherein performing text manipulation comprises: generating a textual output based on the extracted graph fragments (col. 2, lines 50-55).

Claim 26:

Lin discloses the method of claim 1 and further comprising: ordering the graph fragments based on scores corresponding to the graph fragments (Fig. 6, item 107 and related text).

Claim 27:

Lin discloses the method of claim 26 wherein ordering further comprises: ordering the graph fragments based on factors in addition to the scores (Fig. 8, item 302 and related text).

Claim 29:

Lin discloses the method of claim 1 wherein the characteristic of interest comprises one of words, text fragments, concepts, events, entities, and topics (col. 2, lines 33-37).

***Allowable Subject Matter***

5. Claims 14, 19 – 23, and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Weise (USPN 6,236,959) discloses a method for parsing a natural language input.
- b. Richardson et al (USPN 6,098,033) discloses a facility for determining similarity between two input words utilizing the frequencies with which path patterns occurring between the words occur between words known to be synonyms
- c. Duan et al (USPN 6,721,697) discloses a method where a text input stream is broken into tokens, the tokens are used to create a connection graph comprising a number of paths, and each of the paths is assigned a cost. At least



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one best path is defined based upon a corresponding cost to generate an output graph.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel G. Neway whose telephone number is 571-270-1058. The examiner can normally be reached on Monday - Friday 8:30AM - 5:30PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SN

SN

  
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